

IN THE CLAIMS:

1. (Amended) An isolated polynucleotide which encodes a *Bacillus thuringiensis* insecticidal toxin or insecticidal fragment thereof, wherein said polynucleotide hybridizes under conditions selected from the group consisting of stringent hybridization conditions and specific hybridization conditions with one or more of the nucleotide sequences selected from the group consisting of SEQ ID NO:2, SEQ ID NO:3 (tic901), SEQ ID NO:5(tic1201), SEQ ID NO:7 (tic407), SEQ ID NO:9 (tic417), ~~SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:19, SEQ ID NO:20, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, SEQ ID NO:24, SEQ ID NO:25, SEQ ID NO:26, SEQ ID NO:27, SEQ ID NO:28, SEQ ID NO:29, SEQ ID NO:30,~~ and SEQ ID NO:32 or with the complement thereof.

2. (Original) The isolated polynucleotide of claim 1 wherein said toxin is active against a coleopteran insect pest.

3. (Original) The isolated polynucleotide according to claim 2 wherein said coleopteran insect pest is selected from the group consisting of a corn rootworm and a Colorado potato beetle.

4. (Original) The polynucleotide according to claim 3 wherein said corn rootworm is selected from the group consisting of a western corn rootworm, a southern corn rootworm, or a northern corn rootworm.

5. (Amended) The polynucleotide according to claim 1 wherein said nucleotide sequence is SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, and SEQ ID NO:32.

6. (Amended) A polynucleotide comprising a nucleotide sequence which encodes an approximately 34 to about 39 kDa toxin active against a coleopteran pest, wherein said nucleotide sequence has been optimized for expression in plants, and wherein said toxin comprises the amino acid sequence selected from the group consisting of SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, ~~SEQ ID NO:31,~~ and SEQ ID NO:33.

7. (Amended) A host cell transformed to contain a polynucleotide encoding an insecticidal protein or insecticidal fragment thereof wherein said polynucleotide comprises a nucleotide sequence as set forth in a sequence selected from the group consisting of SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, ~~SEQ ID NO:13, SEQ ID NO:30,~~ and SEQ ID NO:32.

8. (Previously Presented) The host cell of claim 7 wherein said host cell is selected from the group consisting of a plant cell, a bacterial cell, a fungal cell, an insect cell, and a mammalian cell.

9. – 13. (Cancelled)

14. (Amended) A method for detecting a first nucleotide sequence encoding an insecticidal protein wherein said first nucleotide sequence hybridizes to a second nucleotide sequence that is selected from the group consisting of SEQ ID NO:2, SEQ ID NO:3 (tic901), SEQ ID NO:5 (tic1201), SEQ ID NO:7 (tic407), SEQ ID NO:9 (tic417), ~~SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:19, SEQ ID NO:20, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, SEQ ID NO:24, SEQ ID NO:25, SEQ ID NO:26, SEQ ID NO:27, SEQ ID NO:28, SEQ ID NO:29, SEQ ID NO:30,~~ and SEQ ID NO:32 (tic431) or with the complement thereof under stringent hybridization conditions.

15. (Cancelled)

16. (Amended) A method for detecting a first nucleotide sequence encoding an insecticidal protein, comprising the steps of (a) producing an amplicon from a template comprising said first nucleotide sequence in a sample using amplification primers comprising the sequences as set forth in SEQ ID NO:13 and SEQ ID NO:14; (b) isolating and purifying the amplicon; (c) isolating and purifying the complete first nucleotide sequence encoding said insecticidal protein based on the isolated and purified amplicon sequence; and (d) expressing said insecticidal protein in a host cell from said first nucleotide sequence, wherein said first nucleotide sequence hybridizes to a second nucleotide sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, ~~SEQ~~

~~ID NO:11, SEQ ID NO:30,~~ and SEQ ID NO:32 or complements thereof under stringent hybridization conditions.

17. (Original) The method according to claim 16 wherein said host cell is selected from the group of cells comprising a plant cell, a bacterial cell, a fungal cell, an insect cell, and a mammalian cell.

18. (Original) The method according to claim 17 wherein said host cell is a plant cell selected from the group of plant cells comprising a monocot plant cell and a dicot plant cell.

19. (Original) The method according to claim 18 wherein said monocot plant cell is selected from the group of plant cells comprising a corn plant cell, a wheat plant cell, a rice plant cell, an oat plant cell, an onion plant cell, and a grass plant cell.

20. (Original) The method according to claim 18 wherein said dicot plant cell is selected from the group of plant cells comprising a cotton plant cell, a canola plant cell, a soybean plant cell, a fruit tree plant cell, an okra plant cell, a pepper plant cell, an ornamental plant cell, a sunflower plant cell, a cucurbit plant cell, and a melon plant cell.

21. (Amended) An isolated nucleic acid molecule comprising a polynucleotide sequence encoding a toxin protein wherein said toxin protein comprises a sequence that exhibits at least about 70% sequence identity to a nucleotide sequence selected from the group of amino acid sequences consisting of SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, ~~SEQ ID NO:31,~~ and SEQ ID NO:33, or a coleopteran-active variant or portion thereof.

22. (Amended) The isolated nucleic acid molecule of claim 21, wherein said polynucleotide sequence hybridizes to a nucleic acid sequence selected from the group consisting of SEQ ID NO:2, SEQ ID NO:3 (tic901), SEQ ID NO:5(tic1201), SEQ ID NO:7 (tic407), SEQ ID NO:9 (tic417), ~~SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:19, SEQ ID NO:20, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, SEQ ID NO:24, SEQ ID NO:25, SEQ ID NO:26, SEQ ID NO:27, SEQ ID NO:28,~~

~~SEQ ID NO:29, SEQ ID NO:30,~~ and SEQ ID NO:32 (tic431), or with the complement thereof under stringent hybridization conditions.

23. – 26. (Cancelled)

27. (Amended) A recombinant DNA construct, comprising a polynucleotide sequence encoding an insecticidal protein, wherein said polynucleotide sequence is at least about 70% identical to SEQ ID NO:13, said insecticidal protein being selected from the group consisting of all or an insecticidal fragment of a protein as set forth in SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:6, SEQ IDNO:10, ~~SEQ ID NO:31,~~ and SEQ ID NO:33.

28. (Amended) The recombinant DNA construct of claim 27, wherein said polynucleotide sequence is as set forth in SEQ ID NO:~~[3]~~9.

29. – 34. (Cancelled)

35. (Amended) A recombinant host cell transformed with a polynucleotide sequence of claim 27 encoding an insecticidal protein selected from the group consisting of SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, ~~SEQ ID NO:31,~~ and SEQ ID NO:33.

36. (Original) The recombinant host cell of claim 35, wherein said recombinant host cell is a plant cell.

37. – 47. (Cancelled)